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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,242	10/16/2003	Jeffrey H. Hunt	024.0035	2466
29906	7590	01/10/2006	EXAMINER	
INGRASSIA FISHER & LORENZ, P.C. 7150 E. CAMELBACK, STE. 325 SCOTTSDALE, AZ 85251			MENEFEER, JAMES A	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/688,242	Applicant(s) HUNT ET AL.	
	Examiner James A. Menefee	Art Unit 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-20 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-10 and 12-20 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

By the amendment filed 11/28/2005, claims 1, 10, and 12-16 are amended and claim 11 cancelled. Claims 1-9 and 11-20 are pending.

Claim Objections

Claims 12-15 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to properly limit the subject matter of a previous claim. The claims depend from claim 10, drawn to a laser resonator, yet the claims each limit "The birefringent lens of claim 10." If these claims were only drawn to the birefringent lens of claim 10 (and not the laser resonator of claim 10) then the claims would not include each and every limitation of the parent claim. The preambles should be amended to correspond to parent claim 10.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by See (WO 81/02224, previously cited). See Fig. 3 and discussion.

See discloses a laser comprising first and second mirrors 2 each having a reflective surface, a gain medium 1 displaced between the mirrors and configured to produce laser light,

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and in integrated birefringent lens 7,8 displaced between the gain medium and the second mirror configured to directly receive the laser light produced by the gain medium wherein the birefringent lens comprises an optically active material (p. 6 l. 25) and a curved surface (p. 6 l. 26) to thereby simultaneously affect both polarization and focus of light produced by the gain medium and passing therethrough.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8, 10, 12-15, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over See in view of Pang (US 2003/0227957).

Regarding claims 1 and 10, the claims are essentially the same or broader than claim 16, therefore the limitations are disclosed by See as in the rejection of claim 16 above. Except it is not disclosed that the resonator is a resonator "chamber." Pang teaches that a solid-state laser system may be included in an enclosure or chamber. The entire document is relevant. It would have been obvious to one skilled in the art to include the laser system of Marshall in an enclosure so that harmful contaminants can be removed, as taught by Pang.

Regarding claims 2-3, 5, 13, and 19, See discloses the birefringent lens is made of active material, quartz, and has a curved exterior surface. p. 6 ll. 25-26.

Regarding claims 4, 12, and 20, See does not disclose the active material may be calcite. However it is known that calcite is another birefringent material. It would have been obvious to one skilled in the art to use calcite as the birefringent material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Regarding claims 6 and 14-15, the lenses 7,8 are disclosed as having opposite signs. p. 6 l. 30. Therefore, one will be positive, and one will be negative, thus one will be converging with a convex surface and one will be diverging with a concave surface. See Fig. 3.

Regarding claim 8, See's gain medium is a solid-state rod.

Regarding claims 17-18, there is not disclosed a second birefringent lens on the opposing side of the gain medium (i.e. between the first mirror and the gain medium). See's birefringent lenses are for depolarization and birefringence compensation. One skilled in the art would have understood that such effects would be advantageous on both sides of the gain medium, therefore it would have been obvious to one skilled in the art to provide a duplicate of the birefringent lenses on the other side of the gain medium to multiply its effects. A duplication of parts for a multiplied effect absent unexpected results has been held to be obvious. *See In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over See and Pang as applied to claim 1 above, and further in view of the admitted prior art. See and Pang teach the limitations of parent claim 1, but do not teach that the gain medium is a disk or slab.

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Such gain media are known in the art, as indicated by applicant's admitted prior art. See par. [0003]. It would have been obvious to one skilled in the art to choose between a disk or slab (and the rod See) as a matter of design choice depending on the pumping mechanism and whether the output is designed to optimize output power, efficiency, or beam propagation characteristics, as taught in the admitted prior art.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. The new rejections above are presented in response to applicant's amendment, therefore this action is made final.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,


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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Menefee whose telephone number is (571) 272-1944. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James Menefee
January 6, 2006